

## SESSION SUMMARY

### Aging of Reef Fishes

by

Charles S. Manooch, III  
Beaufort Laboratory, Southeast Fisheries Center  
Beaufort, North Carolina

Two papers were presented during the session. And, although they approached the subject of aging reef fish from different levels, they agreed that validation of techniques, and reproducibility of results are critical in age and growth research. Unfortunately, validation is seldom addressed in fisheries age studies.

One of the papers dealt with a relatively new technique - examination of daily growth increments - and the implications to reef fisheries management. Not only may young fish be aged accurately, but also time of spawning, factors affecting spawning (moon phase, tide, water temperature, etc), pelagic and demersal stages of larvae, and estuarine and marine stages of juveniles may be investigated.

The other paper discussed reef fish aging studies by Southeast Fisheries Center personnel using traditional anatomical techniques - scales and otoliths. Results on aging 14 species were presented and problems and future research needs were outlined.

A discussion on aging reef fish followed. The principal objectives of this open forum were to comment on the papers presented, and then discuss current and future research on the aging of reef fish in the South Atlantic Bight, Gulf of Mexico and Caribbean. Is work already completed satisfactory? What techniques, geographical areas, species (stocks), etc. need more emphasis? How may coordination between agencies and institutions within the Region be improved?

The practicality of using daily growth increments on small fishes when length frequency data are available was questioned by Saul Saila. Brothers pointed out that while length frequencies provide a general description of early life history and growth, daily increments on otoliths provide not only accurate age and growth and time of spawning information, but also allow one to look at a variety of environmental and behavioral variables as well.

Another point discussed was that growth parameters - notably  $K$  - from different areas (south Atlantic Bight and Caribbean) are drastically different in the literature. David Olsen, Conner Davis, and Debbie Weiler mentioned that aging work in the Caribbean had used trap-caught fish aged by length frequencies while those in the South Atlantic Bight (SEFC personnel) were hook and line-captured fish aged by handparts. Differences may also be related to water temperatures, method of harvest, histories of